

SECURED SOFTWARE PATCHING AND UPGRADE METHOD FOR DENSELY
DEPLOYED NETWORKS HAVING SPANNING-TREE TOPOLOGY

ABSTRACT OF THE DISCLOSURE

5 A method for secured software patching and upgrade in a distributed wireless sensor network (DSN) includes the steps of providing a spanning-tree network of communications nodes with at least one root node (CH) and at least one software upgrade repository (SR), receiving a software upgrade with the root node (CH), communicating the upgrade from the root node (CH) to the software upgrade

10 repository (SR), and installing the upgrade from the software upgrade repository (SR) to all of the nodes on the same branch by authenticating a patch key and delivering the upgrade from the software upgrade repository (SR) to the nodes after authentication occurs. The communications nodes (1000) can be sensor devices each sensing, processing, transmitting, receiving, and actuating in a given geographical area.

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